

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendments and following remarks.

Applicant appreciates the indication of allowable subject matter in claim 2 of the present application.

By the foregoing amendment, claims 1 and 3 have been amended. No new matter is added. Thus, claims 1-6 are currently pending in the application and subject to examination.

Claims 1 and 3-6 Recite Patentable Subject Matter

In the Office Action mailed February 28, 2005, claims 1 and 3-6 were rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 6,454,364 to Niwa *et al.* ("Niwa"). It is noted that claims 1 and 3 have been amended. To the extent that the rejection remains applicable to the claims currently pending, Applicant hereby traverses the rejection, as follows.

Claim 1 recites, in part:

either front wheels or rear wheels are driven by the engine and the primary electric motor and the other of the front wheels and rear wheels are driven by the secondary electric motor, and

in performing a regeneration of deceleration energy when braking, a regeneration capacity of the primary electric motor and a regeneration capacity of the secondary electric motor are calculated, respectively, so that **the regeneration is performed with either of the electric motors** which can provide a larger generation capacity; and

a member for determining whether the primary electric motor or the secondary electric motor performs the regeneration based on the regeneration capacities of the primary and secondary electric motors. (emphasis added)

Claim 6 recites, in part:

a primary electric motor provided on a front wheel side of the vehicle,

a transmission for transmitting **driving force of the engine and the primary electric motor to front wheels** of the vehicle,

a secondary electric motor provided on a rear wheel side of the vehicle,

a rear differential for connecting **the secondary electric motor to rear wheels** of the vehicle,

regeneration possibility determination means for determining whether or not a regeneration in the primary electric motor and the secondary electric motor is possible,

regeneration capability calculation means for calculating a regeneration capability of the primary electric motor and the secondary electric motor,

regeneration capability comparing means for comparing the regeneration capability of the primary electric motor with the regeneration capability of the secondary electric motor, and

regeneration executing means for making either of the electric motors which can provide a larger regeneration capability execute a regeneration.
(emphasis added)

In claims 1 and 6, the primary electric motor drives either the front wheels or the rear wheels and the secondary electric motor drives the other of the front wheels and the rear wheels. In addition, a regeneration of deceleration energy is performed with the electric motor which can provide a larger regeneration capacity. A member or means determines which electric motor performs the regeneration based on the regeneration capacities or capabilities of the primary and secondary electric motors. Since the front wheels are driven by only one of the electric motors and the rear wheels are driven by the other of the electric motors, a selection is made between the front wheels and the rear wheels when selecting which electric motor performs the regeneration.

Niwa is directed to a braking force control apparatus and method in which an overall braking force of the motor vehicle is controlled in accordance with the braking requirement made by a driver of the vehicle and the ratio of braking forces applied to the front and rear wheels is controlled to maintain a predetermined braking-force ratio.

Niwa discloses “the ratio of the total braking force applied to the front wheels by the friction braking device and the regenerative braking device to the total braking force applied to the rear wheels by the friction braking device and the regenerative braking device is always controlled to be equal to the predetermined braking-force ratio, K_f/K_r .” See Niwa at col. 8, lines 13-19. Niwa further discloses “the regenerative braking force and friction braking force can be controlled so that the regeneration efficiency of the vehicle as a whole is maximized while at the same time the ratio of the braking forces distributed to the front wheels and the rear wheels is kept at the predetermined braking-force ratio.” *Id.* at lines 38-43.

While Niwa discloses selecting between regenerative braking devices and friction control devices to improve the regeneration efficiency of the vehicle as a whole, Niwa neither discloses nor suggests selecting whether the front wheels or the rear wheels perform the regeneration. Niwa merely discloses that a ratio of braking forces between the front and rear wheels is maintained at a predetermined braking-force ratio. Thus, Niwa does not disclose selecting to use only one of the front wheels and the rear wheels.

Moreover, Niwa is primarily concerned with maintaining the predetermined braking force ratio between the front and rear wheels and with controlling the amount of friction and regenerative braking forces applied, in order to maintain vehicle stability.

Regarding regeneration efficiency, Niwa discloses only controlling the regenerative braking force and the friction braking force so that the regeneration efficiency of the vehicle as a whole is maximized. Niwa neither discloses nor suggests determining which of two motors can provide a larger regeneration capacity and selecting the motor with the larger regeneration capacity to perform the regeneration, as in the claimed invention.

To qualify as prior art under 35 U.S.C. §102, a single reference must teach, i.e., identically describe, each feature of a rejected claim. As explained above, Niwa fails to disclose or suggest each and every feature of independent claims 1 and 6. Therefore, it is respectfully submitted that Niwa does not anticipate claims 1 and 6.

Accordingly, withdrawal of the rejection of claims 1 and 6 under 35 U.S.C. § 102(a) is respectfully requested.

Claims 3-5 depend from claim 1. Thus, claims 3-5 are allowable for the same reasons as claim 1, as well as for the additional subject matter recited therein.

Accordingly, withdrawal of the rejection of claims 3-5 under 35 U.S.C. § 102(a) is respectfully requested.

Claim 5 Recites Patentable Subject Matter

In the outstanding Office Action, claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,528,959 to Kitano *et al.* ("Kitano").

In making this rejection, the Office Action asserts that Kitano teaches and/or suggests the claimed invention. The Office Action also asserts that one of ordinary skill in the art would combine Niwa and Kitano. Applicants disagree and request reconsideration of this rejection.

Claim 5 recites, in part:

when a slippage of the wheels is detected, the regeneration in the primary electric motor and the secondary electric motor is prohibited.

The Office Action admits that Niwa does not teach detection of slippage and prohibition of regenerating in primary and secondary motors. The Office Action asserts that Kitano corrects this deficiency in Niwa.

Specifically, the Office Action asserts that Kitano discloses the above feature at col. 1, lines 17-36. However, at col. 1, lines 13-26, Kitano discloses, "[t]he front-and-rear wheel drive vehicle has front wheels thereof driven by an engine and rear wheels thereof driven by an electric motor. This driving force control system reduces the driving force for driving the front wheels for slip control...when it is determined e.g. from the vehicle speed that the vehicle is in a traveling condition in which the vehicle can move forward, the operation of the electric motor is inhibited, thereby saving electric energy of the vehicle."

Thus, Kitano merely teaches reducing the driving force of the engine when a slip is detected and inhibiting the operation of the electric motor when the vehicle is able to move forward again. Kitano neither discloses nor suggests inhibiting regeneration in the primary and secondary electric motor.

As previously noted, Niwa also fails to disclose or suggest inhibiting regeneration in the primary electric motor and the secondary electric motor when a slippage of the wheels is detected.

Since neither reference discloses or suggests the aforementioned feature, it is respectfully submitted that the combination of Niwa and Kitano similarly fails to disclose

or suggest at least the feature of “when a slippage of the wheels is detected, regeneration in the primary electric motor and the secondary electric motor is prohibited”, as recited in claim 5. Thus, claim 5 is neither anticipated nor rendered obvious by the combination of Niwa and Kitano.

Moreover, claim 5 depends from claim 1, which is in condition for allowance. Thus, claim 5 is allowable for the same reasons as claim 1, as well as for the additional subject matter recited therein.

Accordingly, withdrawal of the rejection of claim 5 under 35 U.S.C. § 103(a) is respectfully requested.

Claim 2 Recites Allowable Subject Matter

In the outstanding Office Action, claim 2 was objected to as depending from a rejected base claim. Applicant submits that claim 1, from which claim 2 depends, is in condition for allowance. Thus, claim 2 is allowable for the same reasons as claim 1, as well as for the additional subject matter recited therein.

Accordingly, withdrawal of the objection to claim 2 is respectfully requested.

CONCLUSION

For all of the reasons set forth above, Applicant submits that claims 1-6 are distinguished over the cited art of record and are in condition for allowance. Accordingly, reconsideration and allowance of claims 1-6 and the prompt issuance of a Notice of Allowability are respectfully requested.

If the Examiner believes the application is not in condition for allowance, Applicants respectfully requests that the Examiner contact the undersigned

representative by telephone if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not considered to be timely filed, the Applicant hereby petitions for an appropriate extension of time. The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with this communication to Deposit Account No. 01-2300, referencing Client Matter No.107355-00094.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Michele L. Connell".

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